

FIG. 1

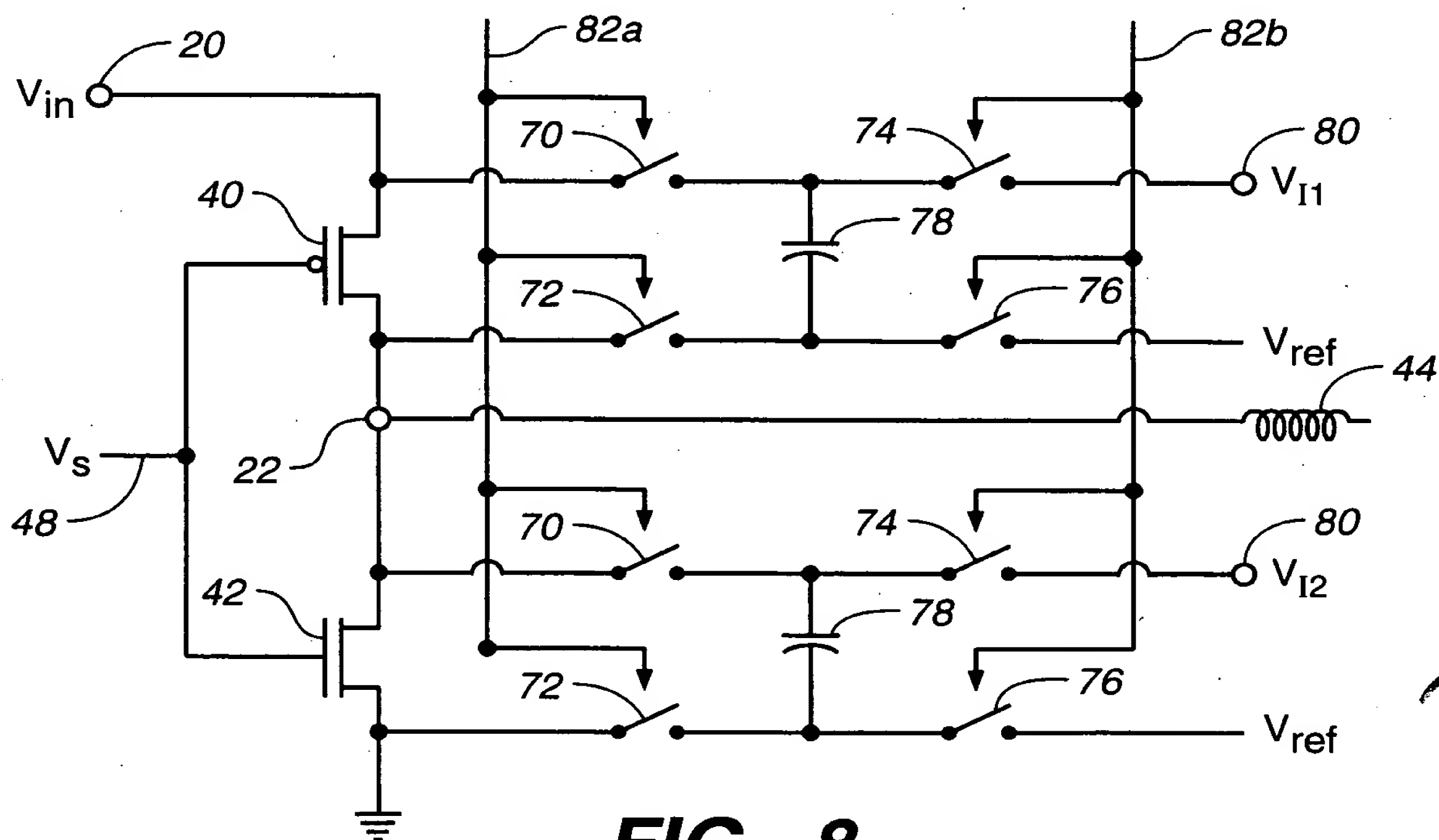
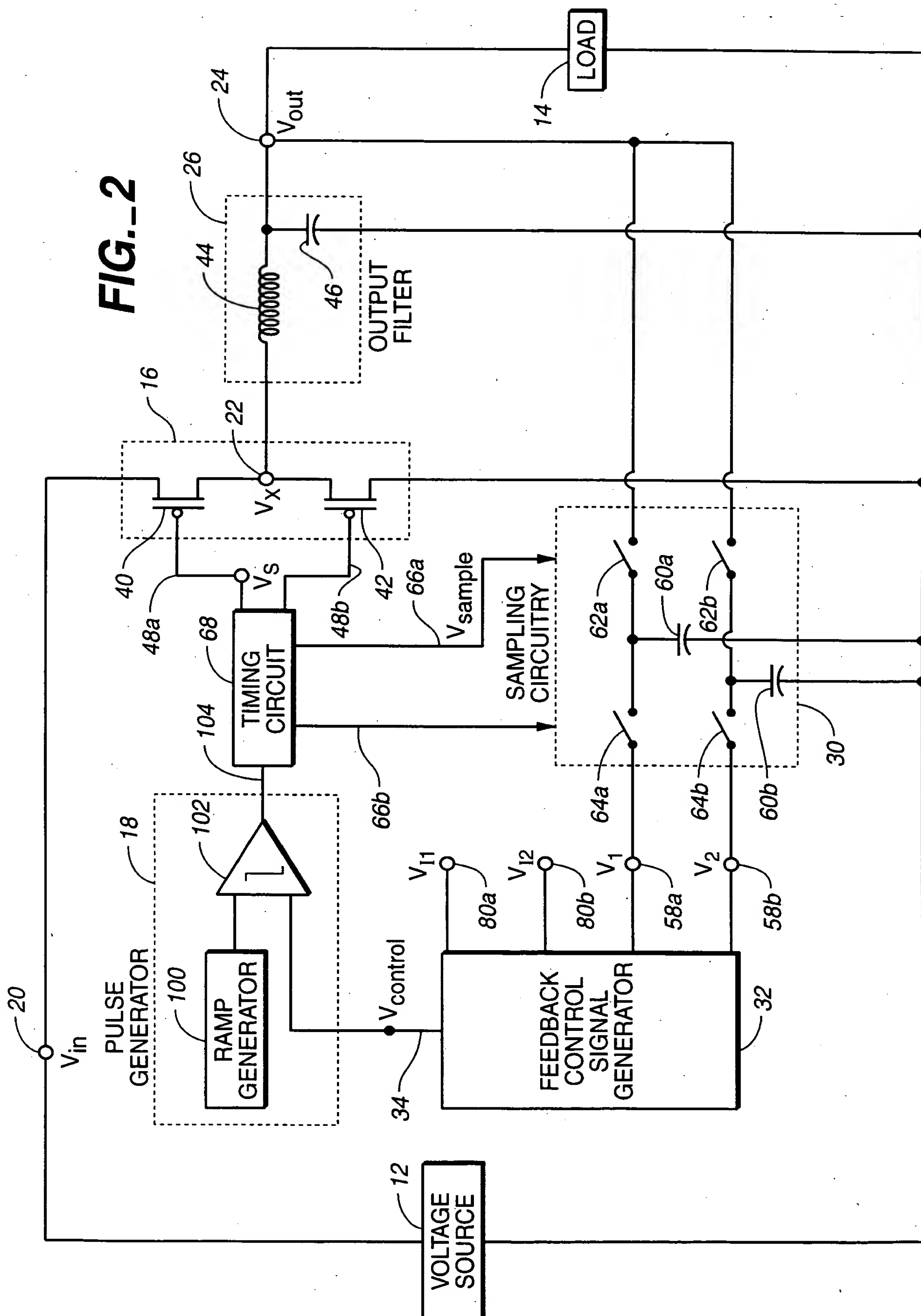


FIG. 8

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Timing diagram for switching voltage V_S versus time T . The diagram shows a square wave switching between HIGH and LOW states. The period is T_S . The high state duration is $(1-d) \cdot T_S$, and the low state duration is $d \cdot T_S$. The PMOS transistor is in conduction during the high state (labeled 50), and the NMOS transistor is in conduction during the low state (labeled 52).

INTERMEDIATE VOLTAGE

The diagram shows a square wave representing the intermediate voltage V_x over time T . The voltage is zero for most of the time and rises to a value V_{in} for a duration $d \cdot T_s$. The total time interval shown is T_s . The time between the start of two pulses is $(1-d) \cdot T_s$.

FIG._4

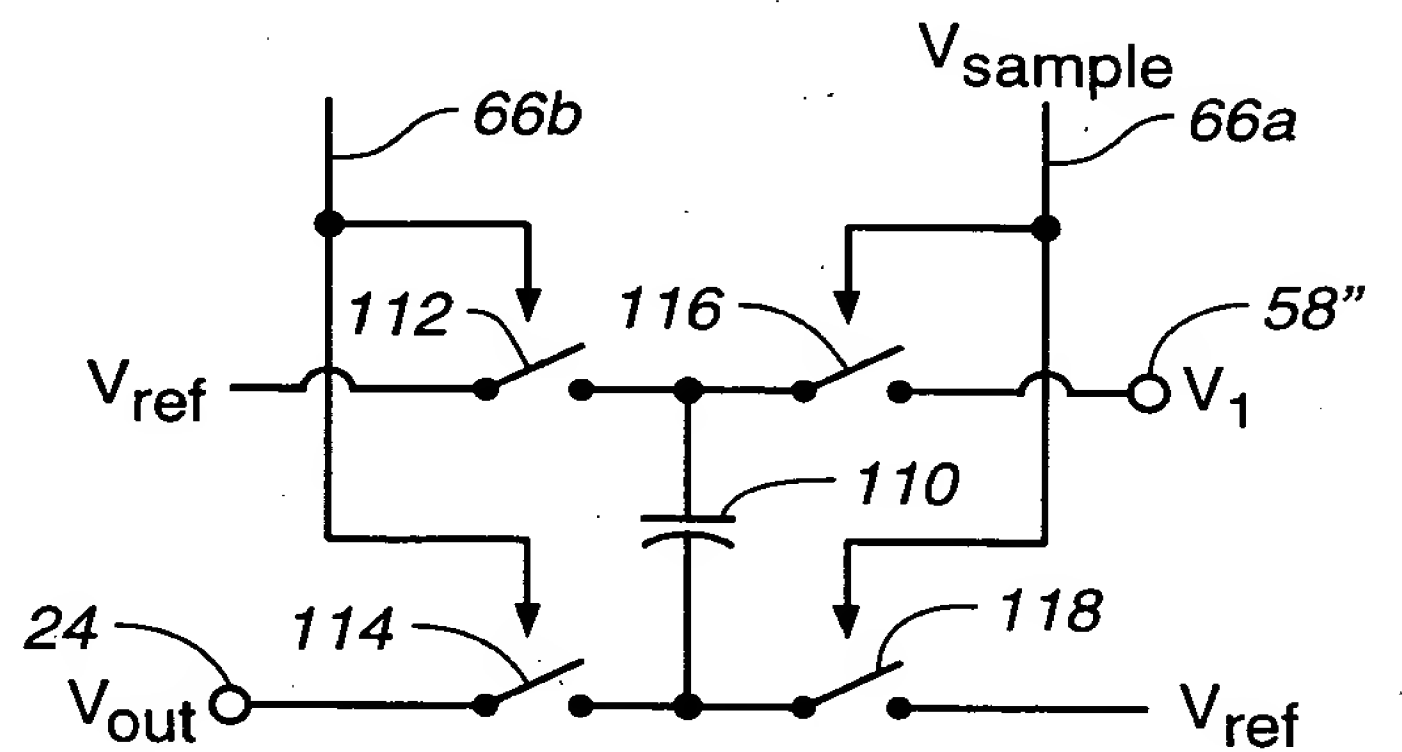
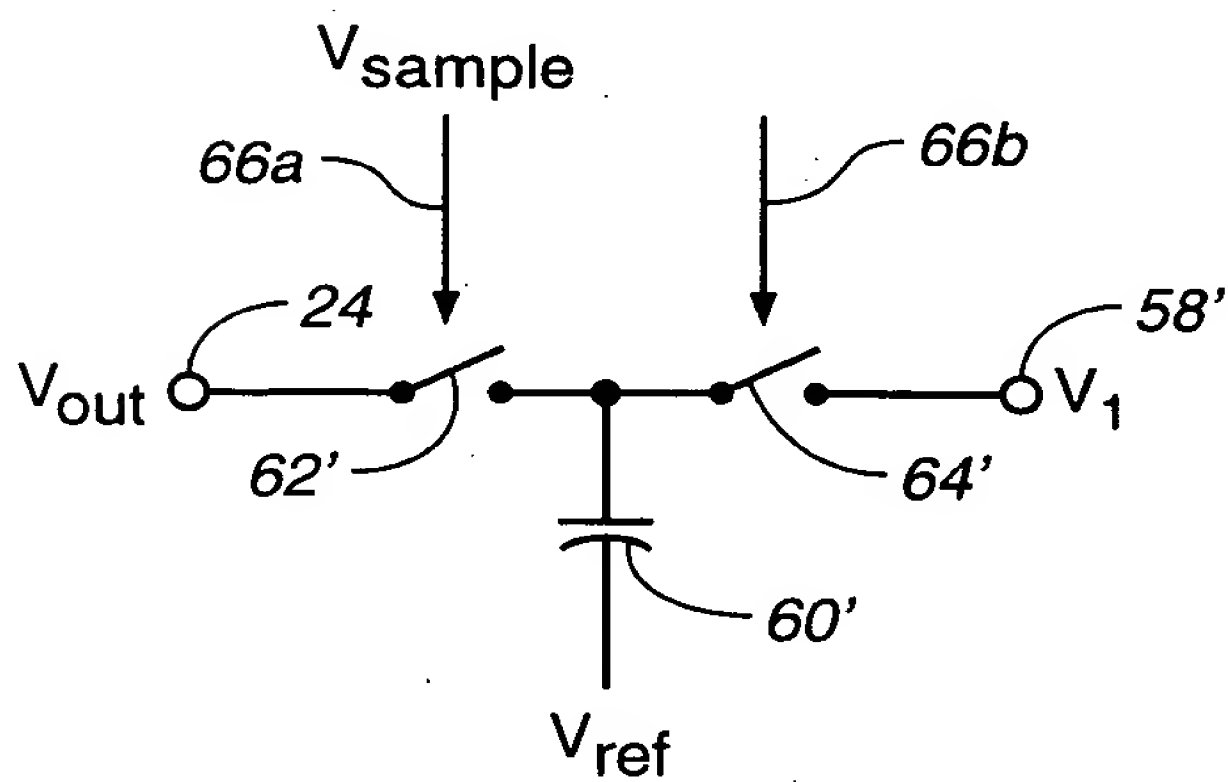
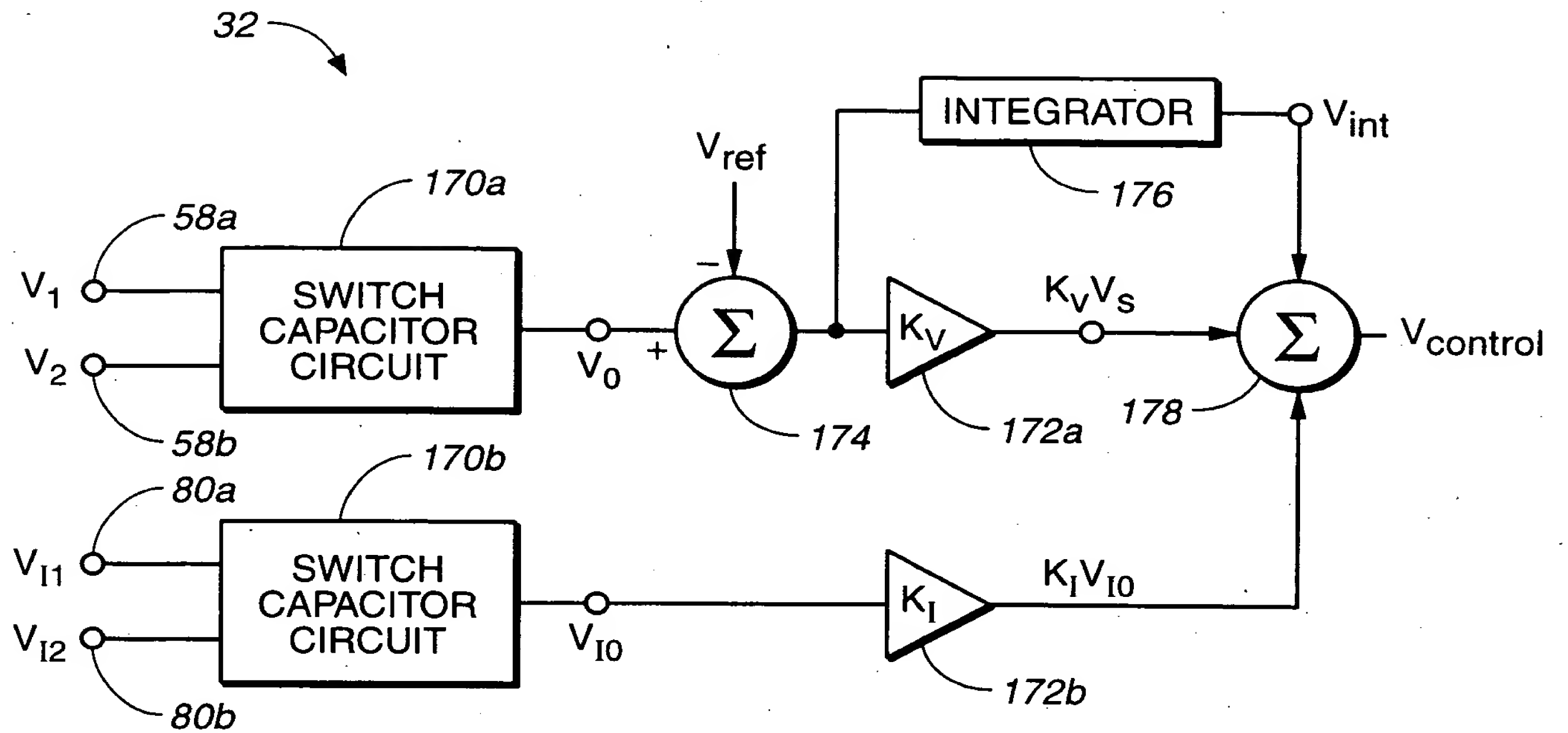
FIG. 5

FIG. 7

FIG. 10

| Country | Year | Value | Unit |
|---------|------|-------|------|
| Algeria | 1980 | 1.00 | 1000 |
| Algeria | 1981 | 1.00 | 1000 |
| Algeria | 1982 | 1.00 | 1000 |
| Algeria | 1983 | 1.00 | 1000 |
| Algeria | 1984 | 1.00 | 1000 |
| Algeria | 1985 | 1.00 | 1000 |
| Algeria | 1986 | 1.00 | 1000 |
| Algeria | 1987 | 1.00 | 1000 |
| Algeria | 1988 | 1.00 | 1000 |
| Algeria | 1989 | 1.00 | 1000 |
| Algeria | 1990 | 1.00 | 1000 |
| Algeria | 1991 | 1.00 | 1000 |
| Algeria | 1992 | 1.00 | 1000 |
| Algeria | 1993 | 1.00 | 1000 |
| Algeria | 1994 | 1.00 | 1000 |
| Algeria | 1995 | 1.00 | 1000 |
| Algeria | 1996 | 1.00 | 1000 |
| Algeria | 1997 | 1.00 | 1000 |
| Algeria | 1998 | 1.00 | 1000 |
| Algeria | 1999 | 1.00 | 1000 |
| Algeria | 2000 | 1.00 | 1000 |
| Algeria | 2001 | 1.00 | 1000 |
| Algeria | 2002 | 1.00 | 1000 |
| Algeria | 2003 | 1.00 | 1000 |
| Algeria | 2004 | 1.00 | 1000 |
| Algeria | 2005 | 1.00 | 1000 |
| Algeria | 2006 | 1.00 | 1000 |
| Algeria | 2007 | 1.00 | 1000 |
| Algeria | 2008 | 1.00 | 1000 |
| Algeria | 2009 | 1.00 | 1000 |
| Algeria | 2010 | 1.00 | 1000 |
| Algeria | 2011 | 1.00 | 1000 |
| Algeria | 2012 | 1.00 | 1000 |
| Algeria | 2013 | 1.00 | 1000 |
| Algeria | 2014 | 1.00 | 1000 |
| Algeria | 2015 | 1.00 | 1000 |
| Algeria | 2016 | 1.00 | 1000 |
| Algeria | 2017 | 1.00 | 1000 |
| Algeria | 2018 | 1.00 | 1000 |
| Algeria | 2019 | 1.00 | 1000 |
| Algeria | 2020 | 1.00 | 1000 |
| Algeria | 2021 | 1.00 | 1000 |
| Algeria | 2022 | 1.00 | 1000 |
| Algeria | 2023 | 1.00 | 1000 |
| Algeria | 2024 | 1.00 | 1000 |
| Algeria | 2025 | 1.00 | 1000 |
| Algeria | 2026 | 1.00 | 1000 |
| Algeria | 2027 | 1.00 | 1000 |
| Algeria | 2028 | 1.00 | 1000 |
| Algeria | 2029 | 1.00 | 1000 |
| Algeria | 2030 | 1.00 | 1000 |
| Algeria | 2031 | 1.00 | 1000 |
| Algeria | 2032 | 1.00 | 1000 |
| Algeria | 2033 | 1.00 | 1000 |
| Algeria | 2034 | 1.00 | 1000 |
| Algeria | 2035 | 1.00 | 1000 |
| Algeria | 2036 | 1.00 | 1000 |
| Algeria | 2037 | 1.00 | 1000 |
| Algeria | 2038 | 1.00 | 1000 |
| Algeria | 2039 | 1.00 | 1000 |
| Algeria | 2040 | 1.00 | 1000 |
| Algeria | 2041 | 1.00 | 1000 |
| Algeria | 2042 | 1.00 | 1000 |
| Algeria | 2043 | 1.00 | 1000 |
| Algeria | 2044 | 1.00 | 1000 |
| Algeria | 2045 | 1.00 | 1000 |
| Algeria | 2046 | 1.00 | 1000 |
| Algeria | 2047 | 1.00 | 1000 |
| Algeria | 2048 | 1.00 | 1000 |
| Algeria | 2049 | 1.00 | 1000 |
| Algeria | 2050 | 1.00 | 1000 |
| Algeria | 2051 | 1.00 | 1000 |
| Algeria | 2052 | 1.00 | 1000 |
| Algeria | 2053 | 1.00 | 1000 |
| Algeria | 2054 | 1.00 | 1000 |
| Algeria | 2055 | 1.00 | 1000 |
| Algeria | 2056 | 1.00 | 1000 |
| Algeria | 2057 | 1.00 | 1000 |
| Algeria | 2058 | 1.00 | 1000 |
| Algeria | 2059 | 1.00 | 1000 |
| Algeria | 2060 | 1.00 | 1000 |
| Algeria | 2061 | 1.00 | 1000 |
| Algeria | 2062 | 1.00 | 1000 |
| Algeria | 2063 | 1.00 | 1000 |
| Algeria | 2064 | 1.00 | 1000 |
| Algeria | 2065 | 1.00 | 1000 |
| Algeria | 2066 | 1.00 | 1000 |
| Algeria | 2067 | 1.00 | 1000 |

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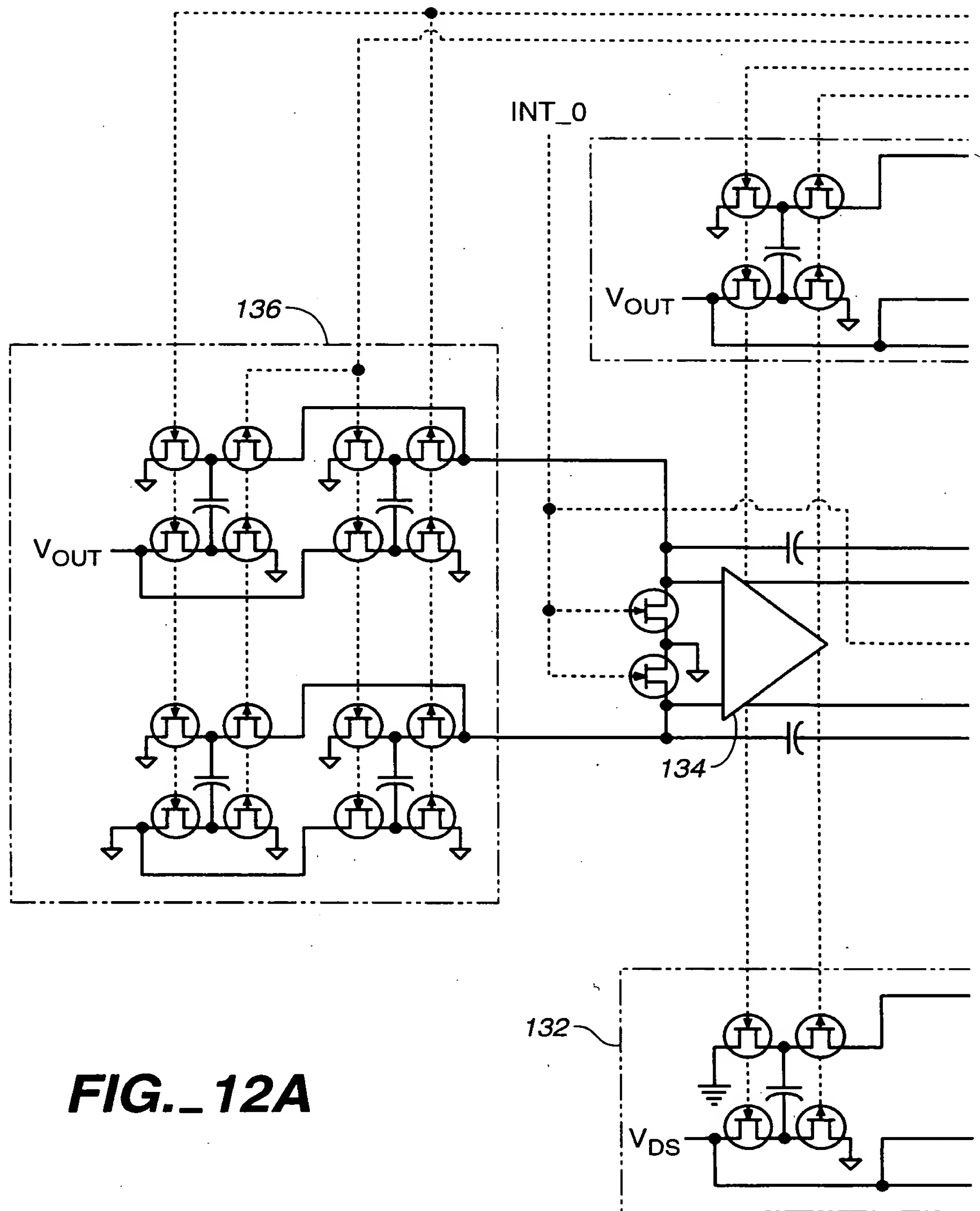


FIG. 12A

FIG. 12

FIG. 12A FIG. 12B

